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# THE CONDOR A MAGAZINE OF WESTERN ORNITHOLOGY.



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## A FORTY-FIVE YEAR HISTORY OF THE SNOWY HERON IN UTAH

By ANTWONET, EDWARD AND A. O. TREGANZA

WITH MAP AND ONE PHOTO BY G. R. WALKER

SIXTY miles north of Salt Lake City, where the Bear River empties into Bear River Bay, an inlet of the Great Salt Lake, thousands upon thousands of acres are covered by a tortuous weaving water web of overflow and spring-run, deviously patterning its surface with mud flat, alkaline bed, grass grown islet, open reach of water—all weft from lake shore to mountain with rank growth of tule and rushes; and so on down the eastern shore of the lake, though somewhat lesser in extent, continue these same marshes, even accompanying the Jordan River to its narrows at the north end of Utah Lake.

In the spring of 1904, through the courtesy and hospitality of Mr. Chas. Knudson of Brigham City, Utah, we were permitted our first knowledge of the great Bear River Marshes. Arriving at his home late in the afternoon, the evening was spent listening to tales of the late sixties and early seventies, when he and his brothers as boys saw the completion of the Central Pacific Railroad, which linked the East with the new West; how, as ardent, inquisitive youths they spent much of their time wandering about this vast expanse of slough, learning little by little the secrets it held. Here they found many species of birds whose home life they studied with eager interest. They had no text book to guide them, but named each in their own vernacular—the Great Blue Heron they called the Blue Crane; the Black-crowned Night Heron, the Squawk; the Snowy Heron, the White Squawk; and the Long-billed Curlew, Willet, Avocet and Black-necked Stilt all went by the name of Snipe. Each spring and fall they noted the myriads of migratory birds passing over these marshes, and love for the feathered life grew deep within them. As the years went by they gradually acquired this land; every alternate section from the railroad, some

school lands from the State, and some by reclamation, until now they possess 10,000 acres of the best feeding and breeding ground for water birds in the inter-mountain country. He also told of a Government man who came out in the early seventies with a survey party to seek some knowledge of the Utah birds; how he paid, what seemed to them, fabulous prices for eggs which they brought to him from marsh and mountain; how he and Mr. James Pett continued collecting specimens which they sent on to this man at Washington. We asked if it were not H. W. Henshaw, and he seemed to feel quite sure that was the name.

The following morning we went by team to the outskirts of the marshes,

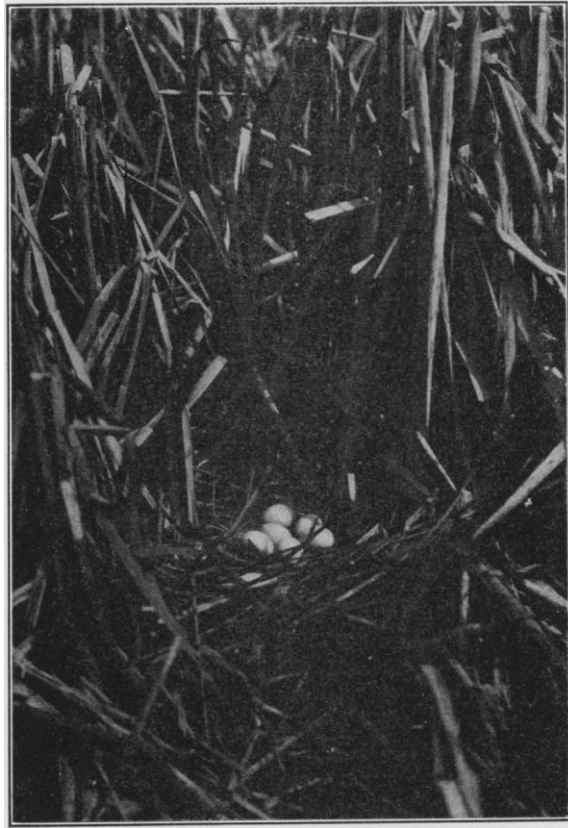


Fig. 71. NEST OF THE SNOWY HERON; BEAR RIVER, UTAH, MAY 1, 1910

where Mr. Knudson secured for us a specimen of the "White Squawk" which proved to be the Snowy Heron (*Ardea candidissima*). He also pointed out the approximate location of the rookery where this bird had nested in company with the Great Blue and Black-crowned Night Heron since his first knowledge of the marshes.

Each successive year we noted many of these birds flying about, but our time being limited and the rookery not easy of access, it was not until April 22, 1910, that Edward Treganza reached the colony. Each year since, one or all three of us have visited this heronry endeavoring to ascertain if these birds were increasing. It is opportune to note here, that this information with other

records of Utah breeding birds, we had hoped to complete very soon; but a recent communication from H. W. Carriger containing a just rebuke from Professor Grinnell for withholding these records, has hastened their transcription.

Lest we had forgotten some detail of Mr. Knudson's reminiscences, and in the hope of gathering some new bit of information, Sunday last, August 30, we again visited him to hear anew his story. He told us of the many offers made him for the purchase of these lands, but he had loved and protected the wild-fowl from boy-hood and could not part with them now—only to the Government would he sell, which could offer the birds even more protection by establishing a well guarded preserve. A few years ago a diminished supply of water from the Bear River threatened the destruction of these marshes; but since the construction of an immense power plant, a permanent supply of water is assured, and these wonderful breeding grounds teeming with bird life will remain a heritage to posterity. Since the building of the Lucin Cut-off, which keeps the salt water of the Lake confined to the mouth of the bay, the Bear River is gradually freshening, and the saline matter is slowly being washed out, making it more healthful and affording better food for the birds.

#### FROM DIARY AND FIELD NOTES

Bear River, Utah, April 22, 23, 1910.—Of sixty-four nests counted by Edward Treganza, only a few contained eggs. A single colony found nesting in company with the Great Blue and Black-crowned Night Heron. Here the rushes were solid enough to sustain one's weight. Each year's tules withering, bowed their heads to the water until successive years' growths matted one upon another, undulating in parched yellow waves, the troughs of which the herons chose for their nests. Along the ragged edges where the new, green growth appeared, an occasional nest was found constructed of broken down reeds and rushes woven into a secure platform and resting but a few inches above the water.

Bear River, Utah, May 1, 2, 1910.—G. R. Walker, J. A. Mullen and the Treganzas again visited the Snowy Heron rookery. Nearly all the nests at this date contained full clutches ranging from three to six eggs, four and five being the usual complement. Following are the measurements of four sets taken from this colony.

Set of six	Set of six	Set of five	Set of eight
1.73x1.30	1.71x1.29	1.65x1.36	1.28x1.60
1.71x1.29	1.68x1.26	1.62x1.25	1.27x1.64
1.77x1.30	1.70x1.31	1.65x1.22	1.28x1.66
1.75x1.275	1.73x1.27	1.61x1.235	1.28x1.67
1.72x1.29	1.67x1.27	1.67x1.34	1.31x1.68
1.79x1.22	1.71x1.30		1.31x1.60
			1.29x1.59
			1.25x1.73

The set of eight is exceptionally large, but only one egg gives indication of having been deposited by another bird. Both size and color of this egg shows considerable variation from the others.

Bear River, Utah, April 11, 12, 1911.—Edward Treganza made an effort to reach the rookeries, hoping to secure some Great Blue Heron eggs, and to ascertain if any of the Snowy Heron had arrived; but on the night of April 11 a terrible storm blew up, bringing with it a heavy fall of snow and a sudden plunge downward of the thermometer.

This storm continued, and the cold was so intense that a thin ice formed on the small still pools, making the trip to the rookery impossible. No Snowy Heron were seen, but a few White-faced Glossy Ibis were noted, and in as much as the Snowy Heron precede the Ibis from a week to ten days, it is reasonable to suppose, that they too were somewhere present.

Bear River Marshes, April 23, 1912.—Snowy Heron rookery visited. Many nests completed, but no eggs. Number of birds noted indicated about thirty percent increase.

Black Sloughs, Salt Lake County, May 25, 1912.—Dr. D. More Lindsay and Morton Cheeseman brought us the information that they had found both the Snowy Heron and the White-faced Glossy Ibis breeding at our old stamping grounds in the Black Sloughs; so Edward Treganza immediately set out to ascertain the size of this new colony. About fifty pairs of Snowy Heron and one hundred pairs of Ibis were found nesting together, all the nests being newly constructed in the young tule growth. This is the first record we have of the breeding of this bird south of the Bear River, Boxelder County; for each year since 1903 we have thoroughly worked the marsh country of Salt Lake County, especially that portion traversed by the overflow of the Salt Lake Drainage Canal, and known as the Black Sloughs.

1913.—This year we decided not to disturb the Snowy Heron in either the old or new colony, but three times we went close enough to the rookeries to note a marked increase in numbers.

Bear River, Boxelder County, Utah, May 2, 1914.—This date found us in the marsh country destined for the rookeries. Within half a mile we noted a number of Snowy Herons rise at our right, whereupon we immediately secured a boat and set out to make investigation. We nosed into the dense tule growth to moor our boat, and had just started to break our way. With the first crackle of the reeds, head after head was seen to rise, long cane-like necks stretched up for inquiry, pure white birds, and in close proximity an iridescent black one; the Ibis with their curved bills looking for all the world like quaint old Jews, lacking but spectacles and a skull cap. Another breaking of reeds, and the whole colony rose en masse, a worrying confusion of wings and squawks and dangling legs; and for once we were actually convinced that white was black and black was white, so confounded were Heron and Ibis. This colony covered an area twenty yards wide by one hundred yards long, and contained no less than one hundred and fifty pairs of Snowy Heron, and about one hundred pairs of White-faced Glossy Ibis. All of the Ibis nests and many of the Herons' were under construction, while some of the latter contained four to five fresh eggs. Having traversed this portion of the marsh at least once annually, we were surprised to find this new and larger colony, for previous years it contained only ducks and a very small colony of Black-crowned Night Heron. All the nests were constructed of the growing reeds and rushes. Though quite dense, there was little matted down growth of years previous, thus much resembling the site of Black Sloughs, Salt Lake County.

Bear River Marshes, Boxelder County, May 9, 1914.—This day we were in quest of Long-billed Curlew. Neither old or new heronry was visited, but many birds were seen circling above the marsh.

Bear River Marshes, Boxelder County, May 16, 1914.—The new colony of Ibis and Heron was visited. All the Heron nests now seemed to be occupied by sitting birds on full clutches. No nest was found to contain more than five eggs, while about thirty percent contained only four.

Here is food for thought for all ornithologists, even those who have much wisdom and would theorize on that which was. How long has the Snowy Heron bred in Utah and why is it breeding here? Is it to be traced back to the time when the sun shone hot on the Northland, or during the epoch of old Lake Bonneville, when these birds might easily have followed up from the sea

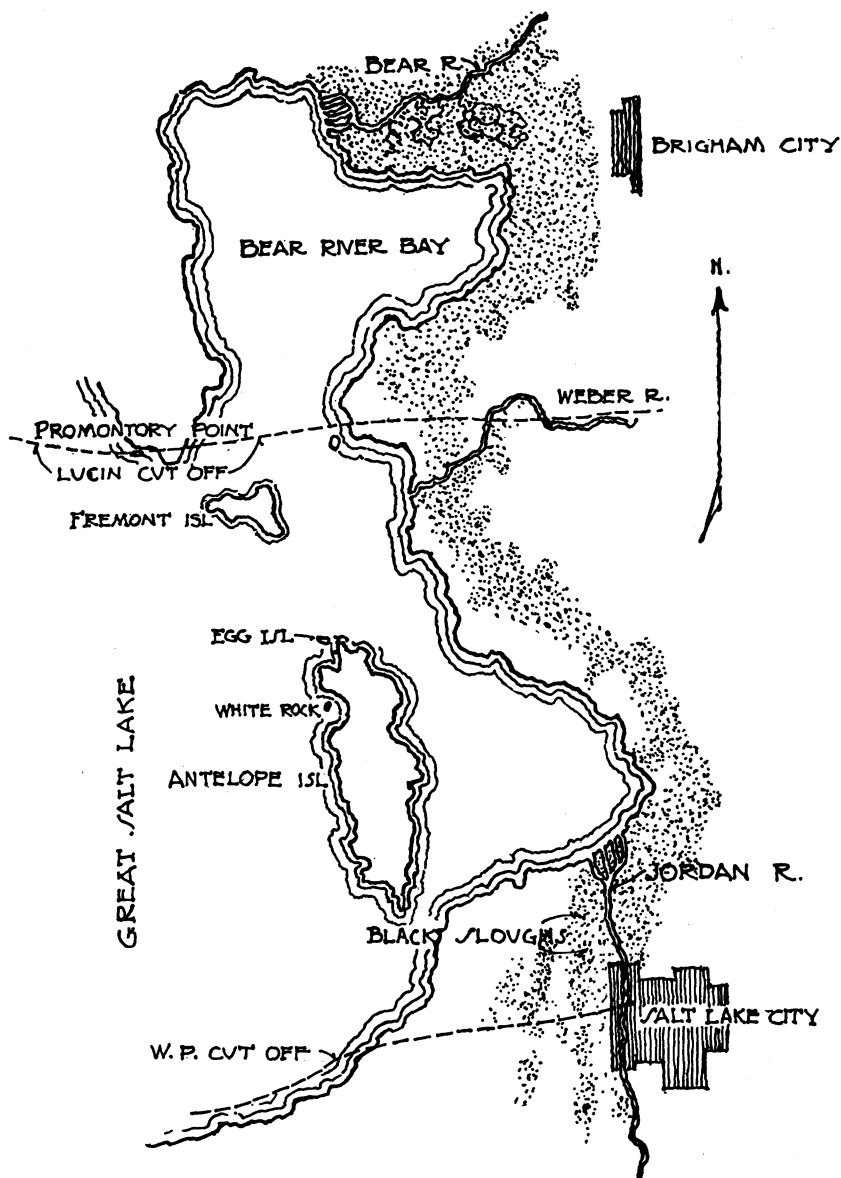


Fig. 72. MEANDERING LINE OF EAST SHORE OF GREAT SALT LAKE AND ITS CONTIGUOUS MARSHES

its connecting arm? Did woman's vanity and vexation of spirit antedate the sixties to such an extent that some small remnant of a colony sought protection in this far north latitude? But theories at best are not facts. That the Snowy Heron breeds in Utah, and has for forty-five years past—the self same

"White Squawk" of Mr. Knudson's boyhood days, which he himself shot in our presence and gave us for identification in 1904, and which specimen we still possess—these are facts.

Then, too, the immensity of undisturbed marsh, affording the best of both feeding and breeding grounds, together with the mild climate of the winters in this Great Basin, where the temperature rarely drops to zero, may offer a justification for its residence here. The birds have increased since our first observations, for annually they are spreading out into new colonies. How much real increase this may mean, we are unable to estimate; for Mr. Knudson tells us that in years past the birds returning each spring fluctuated in number—one spring would find a large colony returned, the following spring only a few pair would occupy the rookery. Is this to be laid at the door of the plume-hunter or did a portion of the birds choose another locality for that year? But the very marked increase since 1904 would indicate that the protection afforded the Snowy Heron here and elsewhere, is having its effect. At our last Legislature a law was passed protecting all bird life in the State, except the Magpie; and the law has not lacked enforcement. Mr. Fred Chambers, State Game Commissioner, with his deputies, and Mr. James Knudson, State and Federal Deputy Warden, have exerted untiring vigilance for the protection of all wild life in Utah.

*Salt Lake City, September 10, 1914.*

## THE EFFECTS OF IRRIGATION ON BIRD LIFE IN THE YAKIMA VALLEY, WASHINGTON

By CLARENCE HAMILTON KENNEDY

THE FOLLOWING article is from observations made while ranching in the Yakima Valley, Washington, during the years from 1909 to 1914. My ranch was an irrigated forty acres, less than ten acres of which was in vineyard and orchard, the remainder being in alfalfa and plow land. The estimates of the number of resident birds in the Yakima Valley are largely based on the numbers which have nested on my forty acres or on land adjoining, which area, though small, was under close and continuous observation for four years. Estimates are not as difficult on an irrigated tract as might seem to an easterner used to the great variety of conditions in a given territory, as on any new irrigation project the conditions are remarkably uniform throughout.

These notes deal only with species resident during nesting time and apply to that part of the valley about thirty miles long and ten miles wide at its widest, which lies between Union Gap and Grandview. Before irrigation, this part of the valley, excepting the narrow strip of verdure along the Yakima River, was a sage brush waste, dotted with sand dunes, and except for an ephemeral spring vegetation following the five to ten inches of winter rainfall, was a true desert.

As its bird population, with the exception of the grouses, now nearly extinct, probably did not differ from that of the sage regions of the valley today, the following list of species resident at the present time in the sage gives us a view of the former bird life in that portion now irrigated.